

Table S5. Microbial community composition of the reactor sediment and coupon samples. Relative abundance (%) of taxa within 16S rRNA. R1, R2: petro-F76 fuel. R3, R4: FT-F76 fuel. R5, R6: mix of petro- and FT-F76 fuel. R7, R8: no fuel added. The R5sed sample had less than the threshold number of reads so was not analyzed. Green cells indicates relative abundance of at least 5%.

A. Sediments. Phylum level taxa, with the exception of Alphaproteobacteria and Gammaproteobacteria (Class level).

Taxon	R1sed	R2sed	R3sed	R4sed	R6sed	R7sed	R8sed
Acetothermia	0.0	0.0	0.0	0.0	0.0	0.2	0.2
Actinobacteriota	4.0	2.8	2.0	3.2	0.4	2.6	0.8
Bacteroidota	3.9	3.4	7.7	2.6	11.3	9.7	7.3
Campylobacterota	10.0	2.8	4.7	2.3	6.9	3.8	1.8
Chloroflexi	0.6	0.9	0.7	3.3	0.7	1.6	2.2
Cyanobacteria	1.0	1.0	1.1	6.8	19.4	1.0	6.0
Deferribacterota	7.5	0.3	0.0	0.0	0.0	0.0	0.0
Desulfobacterota	29.4	45.9	43.3	30.2	21.6	36.7	27.5
Elusimicrobiota	0.0	0.1	0.0	0.0	0.0	1.3	0.0
Firmicutes	11.8	21.5	6.8	7.3	19.9	6.3	10.2
*Alpha Proteobacteria	6.1	12.3	8.1	27.5	6.8	8.7	25.6
*Gamma Proteobacteria	17.4	4.5	14.5	13.4	10.8	14.9	16.2
Spirochaetota	1.9	0.3	1.8	0.2	0.5	5.8	0.1
Synergistota	0.1	0.6	0.1	0.2	0.0	0.0	0.0
Thermotogota	0.3	1.9	0.4	0.3	0.3	0.1	0.1

B. Sediments. Genus level taxa.

Phylum	Class	Order	Family	Genus	R1sed	R2sed	R3sed	R4sed	R6sed	R7sed	R8sed	
Acetothermia	Acetothermia	Acetothermia	Acetothermia	Acetothermia	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2
Actinobacteriota	Actinobacteriota	Actinomarinales	Actinomarinales	Actinomarinales	1.6	0.0	0.7	1.1	0.2	1.5	0.4	0.4
Actinobacteriota	Actinobacteriota	Corynebacteriales	Corynebacteriales	Corynebacteriales	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0
Actinobacteriota	Actinobacteriota	Micrococcales	Cellulomonadaceae	Cellulomonadaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Actinobacteriota	Actinobacteriota	Micrococcales	Intrasporangiaceae	Intrasporangiaceae	0.1	0.7	0.1	0.1	0.0	0.4	0.1	0.1
Actinobacteriota	Actinobacteriota	Micrococcales	Micrococaceae	Micrococaceae	1.9	0.8	0.8	0.4	0.2	0.4	0.3	0.3
Bacteroidota	Bacteroidia	Bacteroidales	Bacteroidetes BD2-2	Bacteroidetes BD2-2	0.5	0.3	1.5	0.3	0.2	3.1	2.5	2.5
Bacteroidota	Bacteroidia	Bacteroidales	Prolixibacteraceae	Prolixibacteraceae	0.5	0.2	0.1	0.8	5.9	0.0	0.0	0.0
Bacteroidota	Bacteroidia	Bacteroidales	Prolixibacteraceae	Prolixibacteraceae	0.0	0.2	0.5	0.2	1.9	0.4	0.1	0.1
Bacteroidota	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Lutibacter	0.3	1.2	1.5	0.3	0.4	0.7	3.3	3.3
Bacteroidota	Bacteroidia	Sphingobacteriales	Lentimicrobiaceae	Lentimicrobiaceae	0.1	0.6	2.5	0.5	0.2	3.9	1.3	1.3
Campylobacterota	Campylobacterota	Campylobacterales	Arco bacteraceae	Arco bacteraceae	0.9	0.7	0.2	0.3	0.8	0.4	0.2	0.2
Campylobacterota	Campylobacterota	Campylobacterales	Arco bacteraceae	Halarcobacter	2.1	0.5	0.4	0.3	0.9	0.0	0.0	0.0
Campylobacterota	Campylobacterota	Campylobacterales	Arco bacteraceae	Poseidonibacter	1.8	1.5	0.5	1.3	2.6	0.5	0.4	0.4
Campylobacterota	Campylobacterota	Campylobacterales	Sulfurimonadaceae	Sulfurimonas	5.7	0.3	2.3	0.1	2.0	1.2	1.2	1.2
Campylobacterota	Campylobacterota	Campylobacterales	Sulfurovaceae	Sulfurovum	2.3	0.0	2.2	0.6	1.1	2.5	0.2	0.2
Chloroflexi	Anaerolineae	Anaerolineales	Anaerolineaceae	ADurb_Bin120	0.5	0.6	0.2	3.4	0.0	0.1	1.9	1.9
Chloroflexi	Anaerolineae	Anaerolineales	Anaerolineaceae	Ornatilinea	0.0	0.1	0.1	0.0	0.7	0.5	0.1	0.1
Chloroflexi	Anaerolineae	Anaerolineales	Anaerolineaceae	Pelotilinea	0.2	0.2	0.4	0.0	0.0	0.3	0.4	0.4
Chloroflexi	Chloroflexia	Thermomicrobiales	JG30-KF-CM45	JG30-KF-CM45	0.0	0.7	0.0	0.1	0.0	0.0	0.0	0.0
Cyanobacteria	Cyanobacteria	Chloroplast	Chloroplast	Chloroplast	1.3	1.1	1.3	7.5	21.1	1.2	6.4	6.4
Deferribacterota	Deferribacteres	Deferribacterales	Deferribacteraceae	Denitrovibrio	7.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfobacteraceae	Desulfobacter	3.6	7.8	3.9	17.1	0.9	1.1	0.8	0.8
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfobacteraceae	Desulfobacteraceae	0.1	0.3	0.9	0.4	2.8	0.0	3.9	3.9
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfobacteraceae	Desulfocavum	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfobacteraceae	Desulfospira	0.0	0.0	0.3	0.0	0.1	0.7	0.1	0.1
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfobacteraceae	Desulfotignum	1.1	0.6	0.3	0.0	0.0	0.0	0.4	0.4
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfobacteraceae	Desulfofolium	0.0	0.4	0.0	0.0	3.4	0.0	0.0	0.0
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfosarcinaceae	Desulfosarcina	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfosarcinaceae	Desulfonatronobacter	0.2	0.9	13.1	0.2	0.0	2.2	0.0	0.0
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfosarcinaceae	Desulfosarcina	0.8	0.0	1.6	0.1	0.2	2.6	0.1	0.1
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfosarcinaceae	Desulfosarcinaceae	0.2	1.7	1.9	0.4	4.1	1.3	0.0	0.0
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfosarcinaceae	Sva0081 sediment group	0.1	0.1	0.3	0.1	0.5	1.3	0.1	0.1
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfosarcinaceae	Desulfosarcinaceae	1.3	0.6	2.3	1.3	0.1	2.7	0.0	0.0
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfosarcinaceae	Desulfosarcinaceae	1.0	1.2	0.5	0.6	0.2	0.4	0.2	0.2
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfosarcinaceae	Desulfosarcinaceae	0.8	1.2	0.2	0.9	0.6	0.4	0.4	0.4
Desulfobacterota	Desulfobacteria	Desulfobacterales	Desulfosarcinaceae	MSB17	3.4	0.0	2.4	0.2	0.8	2.2	0.6	0.6
Desulfobacterota	Desulfovibrionia	Desulfovibrionales	Desulfomicrobiaceae	Desulfomicrobium	0.3	1.3	0.5	0.1	0.5	0.5	0.3	0.3
Desulfobacterota	Desulfovibrionia	Desulfovibrionales	Desulfonatronaceae	Desulfonatronum	1.0	3.6	2.5	1.1	0.6	1.9	0.5	0.5
Desulfobacterota	Desulfovibrionia	Desulfovibrionales	Desulfonatronaceae	Desulfonatronum	0.8	2.7	0.6	0.6	0.3	0.3	0.4	0.4
Desulfobacterota	Desulfovibrionia	Desulfovibrionales	Desulfovibrionaceae	Desulfovibrio	9.0	22.0	11.9	9.2	5.2	18.4	20.5	20.5
Desulfobacterota	Desulfovibrionia	Desulfovibrionales	Halodesulfovibrionaceae	Halodesulfovibrio	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Desulfobacterota	Desulfuromonadia	Desulfuromonadales	Sva1033	Sva1033	1.8	0.0	0.9	0.0	0.2	0.9	0.1	0.1
Desulfobacterota	Desulfuromonadia	Desulfuromonadales	Syntrophotaleae	Syntrophotalea	4.3	2.6	2.1	0.6	1.3	2.5	0.3	0.3
Elusimicrobiota	Elusimicrobia	Lineage IV	Lineage IV	Lineage IV	0.0	0.1	0.0	0.0	0.0	1.6	0.0	0.0
Firmicutes	Bacilli	Acholeplasmatales	Acholeplasmataceae	Acholeplasma	0.2	0.2	0.3	0.2	1.9	0.2	0.0	0.0
Firmicutes	Bacilli	Bacillales	Bacillaceae	Bacillaceae	1.9	3.3	1.0	1.9	1.6	0.9	1.3	1.3
Firmicutes	Bacilli	Bacillales	Bacillaceae	Bacillus	1.3	1.3	0.4	1.0	0.5	0.6	0.6	0.6
Firmicutes	Bacilli	Caldalkalibacillales	Caldalkalibacillaceae	Caldalkalibacillus	2.5	1.6	1.3	1.5	0.5	0.8	0.2	0.2
Firmicutes	Bacilli	Erysipelotrichales	Erysipelotrichaceae	Erysipelothrix	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Firmicutes	Bacilli	Izemoplasmatiales	Izemoplasmataceae	Izemoplasmataceae	0.5	0.3	0.3	0.3	9.3	0.4	2.6	2.6
Firmicutes	Bacilli	Izemoplasmatiales	Izemoplasmataceae	Izemoplasmataceae	1.4	0.7	1.3	0.9	3.8	0.8	3.9	3.9
Firmicutes	Clostridia	Clostridia vadinBB60 group	Clostridia vadinBB60 group	Clostridia vadinBB60 group	0.0	0.0	0.1	0.0	0.0	0.3	0.2	0.2
Firmicutes	Clostridia	Clostridiales	Clostridiaceae	Clostridium sensu stricto 18	1.0	2.6	0.5	0.5	0.2	0.4	0.4	0.4
Firmicutes	Clostridia	Eubacteriales	Garciellaceae	Garciella	2.1	5.7	1.0	0.6	1.3	1.3	0.7	0.7
Firmicutes	Clostridia	Oscillospirales	Hungateiclostridiaceae	Ercella	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Firmicutes	Clostridia	Peptostreptococcales-Tissierellales	Dethiosulfatibacteraceae	Dethiosulfatibacter	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Firmicutes	Clostridia	Peptostreptococcales-Tissierellales	JTB215	JTB215	0.2	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Firmicutes	Clostridia	Thermocolales	Thermocolaceae	Thermicola	0.1	1.1	0.1	0.0	0.2	0.1	0.4	0.4
Firmicutes	Desulfotomaculia	Desulfotomaculiales	Desulfotomaculiales Incertae Sedis	Desulfallia-Sporotomaculum	0.3	1.3	0.3	0.1	0.1	0.3	0.0	0.0
Firmicutes	Firmicutes	Firmicutes	Firmicutes	Firmicutes	0.1	0.3	0.0	0.0	0.2	0.0	0.0	0.0
Firmicutes	Incertae Sedis	Thermolithobacteriales	Thermolithobacteraceae	Thermolithobacter	0.0	0.7	0.0	0.1	0.0	0.1	0.0	0.0
Firmicutes	Moorellia	Desulfitribacterales	Desulfitribacteraceae	Desulfitribacter	0.3	1.2	0.3	0.2	1.5	0.3	0.1	0.1
Firmicutes	Thermacetogenia	Thermacetogeniales	Thermacetogeniaceae	Thermacetogeniaceae	0.1	0.6	0.0	0.2	0.0	0.2	0.1	0.1
Patesicbacteria	Gracilibacteria	Absconditibacteriales (SR1)	Absconditibacteriales (SR1)	Absconditibacteriales (SR1)	0.0	0.1	0.0	0.0	0.0	1.7	0.0	0.0
Proteobacteria	Alphaproteobacteria	Caulobacterales	Hyphomonadaceae	Hyphomonadaceae	0.0	0.1	0.0	2.1	0.0	0.0	0.0	0.0
Proteobacteria	Alphaproteobacteria	Caulobacterales	Hyphomonadaceae	Hyphomonas	0.0	0.1	0.4	0.3	0.5	0.3	0.1	0.1
Proteobacteria	Alphaproteobacteria	Parvibaculales	Parvibaculaceae	MF105B01	0.0	0.2	0.2	1.3	0.0	0.0	0.2	0.2
Proteobacteria	Alphaproteobacteria	Parvibaculales	Parvibaculaceae	Parvibaculum	0.1	0.7	0.1	0.1	0.0	0.0	0.0	0.0
Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae	Cohesiobacter	0.1	0.2	0.2	1.1	0.2	0.0	0.1	0.1
Proteobacteria	Alphaproteobacteria	Rhodobacteriales	Rhodobacteraceae	Paracoccus	0.6	2.8	0.6	0.6	0.3	0.0	0.4	0.4
Proteobacteria	Alphaproteobacteria	Rhodobacteriales	Rhodobacteraceae	Rhodobacteraceae	0.6	2.5	3.0	6.6	1.7	2.4	3.3	3.3
Proteobacteria	Alphaproteobacteria	Rhodobacteriales	Rhodobacteraceae	Ruegeria	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Proteobacteria	Alphaproteobacteria	Rhodospirillales	AEGEAN-169 marine group	AEGEAN-169 marine group	0.0	0.4	0.0	0.0	0.1	0.0	0.1	0.1
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Magnetospiraceae	Magnetovibrio	1.1	4.6	2.4	13.4	0.4	2.5	19.0	19.0
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Terasakiellaceae	Terasakiella	0.0	0.1	0.0	0.0	0.5	0.0	0.0	0.0
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Thalassospiraceae	Thalassospira	0.5	0.1	0.0	0.0	0.1	0.0	0.1	0.1
Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	Erythrobacter	0.0	0.5	0.2	0.1	0.1	1.3	0.7	0.7
Proteobacteria	Alphaproteobacteria	Thalassobaculales	Thalassobaculaceae	Thalassobaculum	0.0	0.0	0.1	2.0	0.0	0.6	0.4	0.4
Proteobacteria	Gamma proteobacteria	CH2B56	CH2B56	CH2B56	0.0	0.0	0.4	0.0	0.0	0.1	1.5	1.5
Proteobacteria	Gamma proteobacteria	Chromatiales	Sedimenticolaceae	Candidatus Thiodiazotropha	0.0	0.2	0.0	0.2	1.7	0.5	0.1	0.1
Proteobacteria	Gamma proteobacteria	Ectothiorhodospirales	Thioalkalipiraceae	Thioalkalipiraceae	1.0	0.4	0.6	5.2	0.9	0.5	0.2	0.2
Proteobacteria	Gamma proteobacteria	Enterobacteriales	Pseudalteromonadaceae	Pseudalteromonas	1.9	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Proteobacteria	Gamma proteobacteria	Enterobacteriales	Shewanellaceae	Shewanella	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Proteobacteria	Gamma proteobacteria	Enterobacteriales	Vibrionaceae	Vibrio	0.3	0.2	0.0	0.1	0.2	0.2	0.0	0.0
Proteobacteria	Gamma proteobacteria	Gamma proteobacteria Incertae Sedis	Unknown Family	Unknown Family	0.5	1.1	3.5	3.8	1.5	10.3	10.9	10.9
Proteobacteria	Gamma proteobacteria	Immundisolibacteriales	Immundisolibacteraceae	Immundisolibacter	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Proteobacteria	Gamma proteobacteria	Pseudomonadales	Halomonadaceae	Halomonas	0.5	0.4	0.2	0.2	0.0	0.3	0.1	0.1
Proteobacteria	Gamma proteobacteria	Pseudomonadales	Marinobacteraceae	Marinobacter	3.2	1.1	1.5	2.6	1.1	0.4	0.3	0.3
Proteobacteria	Gamma proteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter	0.1	0.3	1.8	0.0	0.0	0.0	0.2	0.2
Proteobacteria	Gamma proteobacteria	Pseudomonadales	Nitricolaceae	Amphritea	0.2	0.3	0.0	0.6	0.4	0.0	0.1	0.1
Proteobacteria	Gamma proteobacteria	Pseudomonadales	Nitricolaceae	Marinobacterium	0.8	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Proteobacteria	Gamma proteobacteria	Pseudomonadales	Nitricolaceae	Neptunomonas	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Proteobacteria	Gamma proteobacteria	Pseudomonadales	Nitricolaceae	Nitricola	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Proteobacteria	Gamma proteobacteria	Steroidobacteriales	Woesiaceae	Woesia	3.3	0.0	3.0	0.4	1.2	1.7	0.5	0.5
Proteobacteria	Gamma proteobacteria	Thiotrichales	Thiotrichaceae	Thiotrichaceae	3.2	0.0	3.0	0.2	1.8	1.3	0.9	0.9
Spirochaetota	Spirochaetia	Spirochaetales	Spirochaetaeae	Alkalispirochaeta	0.5	0.1	1.4	0.0	0.0	1.0	0.0	0.0
Spirochaetota	Spirochaetia	Spirochaetales	Spirochaetaeae	Sediminspirochaeta	0.6	0.2	0.0	0.0	0.5	1.2	0.1	0.1
Spirochaetota	Spirochaetia	Spirochaetales	Spirochaetaeae	Spirochaeta 2	1.0	0.1	0.6	0.2	0.0	4.3	0.1	0.1
Thermotogota	Thermotogae	Kosmotogales	Kosmotogaceae	Kosmotoga	0.3	1.6	0.4	0.2	0.2	0.1	0.1	0.1

C. Coupons. Phylum level taxa, with the exception of Alphaproteobacteria and Gammaproteobacteria (Class level).

Taxon	R1c2	R1c3	R2c1	R2c2	R2c3	R3c1	R3c2	R3c3	R4c1	R4c2	R4c3	R5c1	R5c2	R5c3	R6c1	R6c2	R6c3	R7c1	R7c2	R7c3	R8c1	R8c2	R8c3
Acetothermia	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.8	0.7	0.5	0.7	0.9	0.7
Actinobacteriota	0.7	1.0	4.1	4.4	5.0	0.7	1.0	2.7	0.9	0.4	0.5	1.1	3.8	2.4	2.3	3.2	1.7	0.3	0.4	1.0	0.5	0.5	0.6
Bacteroidota	0.5	0.5	5.3	1.5	3.4	1.3	1.2	2.1	0.3	0.4	0.4	0.8	3.8	1.4	2.2	2.9	2.2	1.8	1.0	0.8	0.9	1.2	1.6
Campylobacterota	7.0	5.5	14.0	4.2	11.6	1.4	1.0	1.3	2.0	1.7	1.1	3.6	4.8	3.3	6.9	5.3	5.0	1.3	1.6	1.5	0.6	0.9	0.9
Chloroflexi	0.1	0.3	0.1	1.0	0.2	0.9	0.4	0.6	7.4	6.5	7.1	0.4	0.8	0.5	1.9	0.9	1.3	1.0	0.4	0.5	0.6	0.5	0.4
Cyanobacteria	0.9	1.0	0.8	4.2	0.7	0.4	0.7	0.7	0.5	0.1	0.8	0.3	2.6	0.8	4.5	0.0	2.0	0.1	0.4	0.2	0.1	0.4	0.3
Deferribacterota	1.7	2.2	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
Desulfobacterota	66.0	63.3	53.8	42.2	41.8	82.6	82.7	76.0	71.7	75.4	76.1	76.2	41.7	64.2	40.7	57.7	50.9	77.6	79.4	81.3	85.6	83.5	84.9
Elusimicrobiota	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.1	2.4	2.5	1.3	0.0	0.0	0.0
Firmicutes	12.3	14.8	5.8	24.2	8.2	6.2	6.7	8.6	4.9	3.7	3.1	8.7	20.0	14.1	21.5	16.0	23.3	4.5	4.7	4.0	5.0	5.9	4.3
* Alpha Proteobacteria	3.1	4.3	8.6	11.9	23.3	2.3	2.9	3.1	4.6	5.4	4.7	2.8	10.6	5.2	7.0	4.6	5.5	1.6	1.5	2.8	2.5	2.4	2.4
* Gamma Proteobacteria	5.8	4.8	6.8	3.2	4.2	3.0	1.8	2.8	6.9	5.6	4.8	4.8	5.0	5.6	9.1	7.0	4.9	5.2	4.9	4.0	2.3	2.2	2.8
Spirochaetota	0.3	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.5	0.1	1.6	1.2	1.2	0.2	0.2	0.2	0.1	0.6	0.3
Synergistota	0.2	0.1	0.1	0.3	0.0	0.0	0.1	0.4	0.0	0.0	0.1	0.0	0.9	0.3	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Thermotogota	0.3	0.6	0.2	0.9	0.4	0.5	0.4	0.7	0.1	0.2	0.3	0.6	1.9	0.9	0.4	0.4	0.5	0.1	0.4	0.3	0.2	0.1	0.2

D. Coupons. Genus level.

Phylum	Class	Order	Family	Genus	R1c2	R1c3	R2c1	R2c2	R2c3	R3c1	R3c2	R3c3	R4c1	R4c2	R4c3	R5c1	R5c2	R5c3	R6c1	R6c2	R6c3	R7c1	R7c2	R7c3	R8c1	R8c2	R8c3			
Acetothermia	Acetothermia	Acetothermia	Acetothermia	Acetothermia	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.5	0.8	0.9	0.7		
Actinobacteria	Actinobacteria	Actinominales	Actinominales	Actinominales	0.1	0.1	0.0	0.0	0.2	0.2	0.3	0.0	0.1	0.1	0.0	0.2	0.0	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1		
Actinobacteria	Actinobacteria	Corynebacteriales	Dietsiaceae	Dietsia	0.0	0.2	0.1	0.4	0.0	0.2	0.3	0.2	0.2	0.1	0.2	0.7	0.3	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.2	0.1		
Actinobacteria	Actinobacteria	Micrococcales	Cellulomonadaceae	Actinotalea	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Actinobacteria	Actinobacteria	Micrococcales	Intrasporangiaceae	Ornithinococcus	0.0	0.0	0.1	0.1	0.0	0.0	0.7	0.2	0.0	0.0	0.5	0.4	0.5	0.1	0.2	0.3	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1		
Actinobacteria	Actinobacteria	Micrococcales	Nesterenkonia	Nesterenkonia	0.4	0.6	1.3	1.9	0.5	0.7	0.8	0.3	0.1	0.4	0.4	0.6	0.7	1.3	3.2	1.0	0.2	0.1	0.6	0.3	0.2	0.4	0.2	0.4		
Bacteroidota	Bacteroidia	Bacteroidales	Bacteroidetes BD2-2	Bacteroidetes BD2-2	0.0	0.0	0.0	0.0	0.5	0.5	0.4	0.0	0.1	0.1	0.2	0.6	0.1	0.0	0.3	0.1	0.1	0.3	0.2	0.6	0.7	0.6	0.0	0.0		
Bacteroidota	Bacteroidia	Bacteroidales	Prolixibacteraceae	Dracombacterium	0.0	0.1	0.7	0.0	0.7	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.1	0.3	1.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bacteroidota	Bacteroidia	Bacteroidales	Prolixibacteraceae	Prolixibacteraceae	0.1	0.1	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.8	0.7	1.0	0.4	0.2	0.1	0.0	0.1	0.0	0.1	0.2	0.2		
Bacteroidota	Bacteroidia	Bacteroidales	Lentimicrobiaceae	Lentimicrobiaceae	0.2	0.0	0.0	0.7	0.1	0.2	0.6	0.0	0.0	0.0	0.1	0.7	0.3	0.1	0.1	0.1	0.1	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	
Campylobacterota	Campylobacteria	Campylobacterales	Arcobacteraceae	Arcobacteraceae	1.5	1.8	4.4	0.4	4.4	0.0	0.2	0.4	0.4	0.3	0.3	1.1	0.6	1.7	1.1	1.1	0.5	0.6	0.3	0.3	0.2	0.3	0.2	0.3		
Campylobacterota	Campylobacteria	Campylobacterales	Arcobacteraceae	Halarcobacter	2.4	1.5	3.0	0.6	4.4	0.4	0.4	0.1	0.3	0.2	0.1	0.9	1.6	1.4	0.3	1.3	0.1	0.2	0.2	0.2	0.0	0.0	0.1	0.1		
Campylobacterota	Campylobacteria	Campylobacterales	Arcobacteraceae	Poseidonibacter	2.8	3.0	6.6	2.9	3.4	0.8	0.6	1.2	1.0	0.7	2.3	1.8	1.9	3.1	4.1	2.3	0.6	0.7	1.1	0.3	0.5	0.5	0.5	0.5	0.5	
Campylobacterota	Campylobacteria	Campylobacterales	Sulfurimonadaceae	Sulfurimonas	0.1	0.1	0.1	0.5	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.4	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	
Campylobacterota	Campylobacteria	Campylobacterales	Sulfurovaceae	Sulfurovum	0.5	0.4	0.3	0.3	0.1	0.1	0.0	0.1	0.1	0.2	0.0	0.1	0.3	0.2	1.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Chloroflexi	Anaerolineae	Anaerolineales	Anaerolineaceae	ADurb_Bin120	0.1	0.1	0.0	0.8	0.1	0.4	0.2	0.2	7.4	6.5	7.2	0.5	0.4	0.4	0.1	0.1	0.0	0.1	0.1	0.2	0.5	0.2	0.2	0.2	0.2	
Chloroflexi	Anaerolineae	Anaerolineales	Anaerolineaceae	Omatilinea	0.0	0.1	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1	1.7	0.9	1.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Chloroflexi	Anaerolineae	Anaerolineales	Anaerolineaceae	Pelolinea	0.0	0.0	0.0	0.0	0.5	0.2	0.4	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	
Chloroflexi	Thermomicrobiales	Thermomicrobiales	IG30-KF-CM45	IG30-KF-CM45	0.1	0.1	0.0	0.4	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.5	0.2	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	
Cyanobacteria	Cyanobacteria	Chloroplast	Chloroplast	Chloroplast	0.9	1.1	0.8	4.3	0.8	0.4	0.7	0.7	0.6	0.1	0.9	3.9	2.9	4.7	0.0	2.1	0.1	0.5	0.2	0.1	0.5	0.3	0.1	0.5	0.3	
Deferribacterota	Deferribacteres	Deferribacterales	Deferribacteraceae	Deferribacter	1.1	1.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfobacteraceae	Desulfobacter	24.1	19.4	14.6	6.0	1.1	1.6	1.7	25.2	26.8	26.2	16.2	6.9	10.5	2.9	1.6	1.8	0.7	2.2	3.1	2.3	1.7	2.2	3.1	2.3	1.7	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfobacteraceae	Desulfobacteraceae	0.5	0.1	1.6	0.0	1.0	0.3	0.2	0.2	0.1	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfobacteraceae	Desulfocoenoxum	0.0	0.0	0.5	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfospirra	Desulfospirra	0.0	0.0	0.0	0.0	0.3	0.3	0.2	0.0	0.0	0.0	0.1	0.9	0.2	0.0	0.0	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfotogum	Desulfotogum	1.1	1.0	0.0	0.0	0.2	0.0	0.2	0.2	0.2	0.1	0.7	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.3	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfofolunaceae	Desulfofoluna	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	2.5	1.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfosarcinaceae	Desulfosarcina	0.7	0.8	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.6	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfosarcinaceae	Desulfosarcinobacter	0.3	0.2	0.2	0.7	0.3	2.6	4.0	2.1	0.0	0.2	0.1	0.6	0.7	0.0	0.0	0.3	0.5	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfosarcinaceae	Desulfosarcina	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.0	0.3	0.2	1.7	0.6	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfosarcinaceae	Desulfosarcinaceae	0.0	0.5	13.5	2.2	13.6	0.2	0.3	0.3	0.1	0.5	0.3	0.5	0.9	0.6	4.4	0.7	2.2	0.0	0.1	0.1	0.4	0.4	0.4	0.4	0.4	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfosarcinaceae	Sva0081 sediment group	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	3.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfocapsaceae	Desulfocapsaceae	1.5	1.4	0.0	0.0	0.2	0.0	0.2	5.0	6.1	6.8	0.1	0.7	0.4	0.0	0.0	0.0	2.2	1.2	1.9	0.1	0.4	0.4	0.4	0.4	0.4	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfosarcinaceae	Desulfosarcinaceae	18.9	18.5	0.1	1.1	0.0	2.9	2.1	2.7	3.7	6.7	3.7	3.3	1.3	1.7	0.4	0.3	2.4	1.3	2.3	1.0	1.6	1.6	1.6	1.6	1.6	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfocapsaceae	Desulfocapsaceae	1.1	1.0	0.8	0.0	0.6	0.7	0.5	0.5	4.3	4.4	2.5	11.5	1.6	6.9	1.4	3.3	1.4	1.3	1.1	1.7	1.3	1.1	1.3	1.1	1.3	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfofurivibrionaceae	MSL7	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfomicrobiaceae	Desulfomicrobium	0.7	0.7	0.4	0.0	0.2	0.4	0.2	0.7	0.2	0.2	0.2	1.3	0.2	0.0	0.4	0.2	0.3	0.4	0.1	0.3	0.1	0.3	0.1	0.3	0.1	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfonatronaceae	Desulfonatronum	1.3	0.6	1.0	3.8	0.7	58.9	54.6	52.0	0.5	0.6	1.3	5.6	2.8	5.1	0.5	0.4	1.1	2.1	4.0	2.6	1.1	0.6	0.6	0.6	0.6	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfonatronaceae	Desulfonatronum	0.4	0.9	0.3	2.1	0.3	0.5	0.6	0.4	0.3	0.4	0.7	2.6	1.2	0.4	0.3	0.9	0.9	0.2	0.6	0.7	0.3	0.2	0.3	0.2	0.3	0.2
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfonatronaceae	Desulfonatronum	13.4	16.6	30.1	23.5	23.9	14.4	18.4	16.2	32.7	32.5	35.9	33.6	19.8	33.3	20.1	44.3	31.1	69.0	69.7	69.4	78.2	77.3	78.3	78.3	78.3	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Desulfonatronaceae	Halodesulfobacterium	0.2	0.8	1.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Sva1033	Sva1033	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Desulfobacterota	Desulfobacteria	Desulfobacteriales	Syntrophotaleaceae	Syntrophotalea	3.6																									